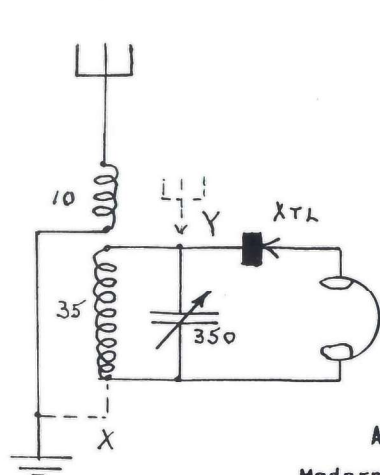
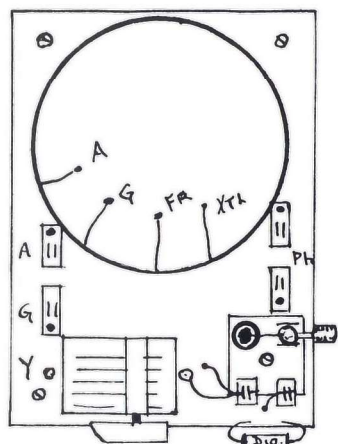


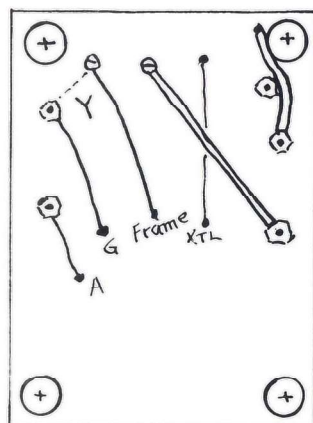
MI "ORIGINAL RADIO" CRYSTAL SET



1. Schematic Diagram.

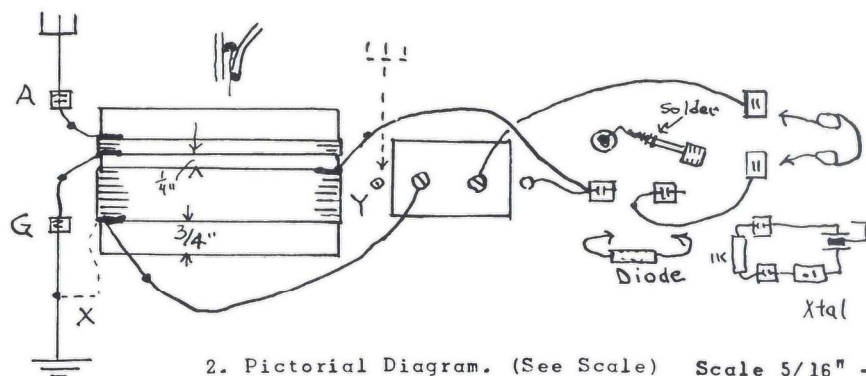


3. Top Base View.



4. Bottom Base View.

In Dec., 1970, issue of "Mechanix Illustrated" (MI) appeared an article by Len Buckwalter, a customer of MRL. Altho it was entitled "Original" - it was about the type we were using in the early 1920's when broadcasting began. As for being "Original" - Marconi didn't invent the Wireless - he only helped commercialize it. Hundreds of able Scientists worked on it before him. It has been a hard pull to



2. Pictorial Diagram. (See Scale) Scale 5/16" - 1"

A Detail Print
by
Modern Radio Laboratories.

Parts List.

- 1 5x7 plywood base, drilled.
- 1 .00035 variable condenser.
- 1 Assembled Xtl stand.
- 50' #22 Enameled magnet wire.
- 1 Pkg. MRL fine catwhiskers.
- 1 Crystal Diode.
- 1 1/4" black bar knob.
- 1 Dial scale to match cond.
- 4 3/4" Fahnstock clips.
- 4 1/2" x 1" long wooden feet.
- 4 4 x 3/4" wood screws.
- 7 6-32 x 1/2" RH mach. screws.
- 5 6-32 x 5/16" hex. nuts.
- 1' #22 hookup wire.

make Radio as simple as it is today for all of us.

This Xtl set contains about as few parts as anyone can use and still have practical tuning and separation of BC stations. For the beginner, with no previous experience - it should be easy to construct and operate.

LAYOUT. Use dividers and the 5/16" scale as shown to measure all distances. Drill holes in base - using 1/8" drill for all screw holes, and smaller drill for wire holes. After drilling - mount the condenser, stand and 4 Fahnstock clips. Cut around dial scale on top and leave flat bottom for glueing to the condenser frame.

COIL. Take a 4" dia. Quaker Oats' box and cut off at 2 1/2" up from bottom. 3/4" up from bottom punch 2 tiny holes for start of secondary coil (2). Leave about 8" of wire and pull thru, back and thru to make it tight. Then stretch out wire and pull thru a rag to take out kinks. Wind on 35 turns and punch 2 more holes and anchor. Then 1/4" from this, punch 2 more holes for primary winding, leaving 8" of wire. Now wind on 10 turns and anchor the wire again. Lay coil on base and punch tiny holes thru bottom of box and pull wires thru (3).

Scrape ends of wire as Electricity won't travel thru enameled (shellacked) wire insulation. Hook to screws, etc. as shown. For simplicity - no soldering is required - altho wires soldered to lugs is better. Be sure to cinch up nuts good.

Push stand rod thru ball and solder heavy catwhisker (c/w) to shaft. Wrap fine c/w around this to make a fine contact with Xtl.

Put up a good high Aerial of 50 ft. in a City or 100 ft. or more in the Country. Clamp your ground wire around a water pipe or pipe into ground.

If within a few miles of a BC station - use set as is. Try reversing A-G connections for best results. If 10 or more miles to nearest station - put a jumper wire at (X). If more volume is needed - also put Aerial lead on condenser stator, or stationary plate lug (Y).

Steel galena, or other c/w Xtl may be used. For less trouble - push a fixed Crystal Diode into clips on the stand.

Any good magnetic phones are OK. If using Crystal phones - be sure to hook up a 1000 ohm resistor and .1 mfd. fixed condenser across phone clips as shown.

Altho we had been advertising Xtl sets since 1932 in many Radio magazines - we were surprised to find it was new to so many younger people. Dads had built them; their children had never heard of them! Evidently we hadn't been advertising in the best places. In 1920's Xtl sets were standard on all ships. At present writing we have received over 675 letters pertaining to this "new" field.

Many wanted the complete kit so we were forced to make them up - altho originals didn't use the primary winding. This is essential if you want good selectivity in separating stations. So by now - hundreds more are enjoying Xtl sets as a result of this article.

Xtl and small sets is a real big field. We have spent a good part of our life in this range. Look over our catalog and you'll see what we mean. You will also find our literature useful and interesting - we hope!

You never heard of Xtl sets? Did you know the present Transistor is a crystal set? It has 2 or 3 c/w contacts instead of just one. Looks like we'll never get away from them!

